Microscopy equipment and Settings

DIC images in (Fig. 1A-D,F-G), and (Fig. 2A-B,J-M were acquired using a Zeiss Axiophot compound microscope and an Axiocam digital camera at 1300x1030 resolution with ~25ms exposure and 8bit depth at 30^{o}C. All images were acquired with use of Axiovision software and imported into Adobe Photoshop for orientation. With the exception of Figure 1G, contrast was not adjusted. Flat-mounts and whole-mounts (Figure 2A-B) were visualized with a 10X Axioplan-NEOFLUAR objective. Embryo sections and somite images (Figure 2J-M) were examined with a 40X Axioplan-NEOFLUAR objective. Live embryos were mounted in 2% methyl-cellulose (Figure 1A-B). Fixed embryos were mounted in 50% glycerol/50% PBT. Images of GFP fluorescence in live embryos were gathered with a Leica MZFIII dissecting scope and at Retiga 1300 Q-imaging camera with a two second exposure. Images of fluorescent immunohistochemistry were acquired with a Zeiss LSM510 Meta Laser Scanning microscope (Figure 2C-D,G-I Figure4A-H). All dual-color confocal images were gathered with the following settings: 8bit multitrack scan mode, Pixel time 1.60µs, and with Objective Plan-Neofluar 40x/1.3 Oil DIC, filters Ch2-1: BP505-550 Ch3-2 LP 560. Figure 2C-D resolution 1024x1024, wavelength 488 nm 13% 543nm 10%. Figure 4B,D,F,H resolution 1024x1024 and wavelength 488nm 20% 543nm 25%. Figure 4A,C,E,G resolution 512x512 and wavelength 488nm 11% 543nm 25%. Figure 2G-I resolution 1024x1024, wavelength 543nm 26%, filters Ch3:LP 560. Stacks were acquired with LSM510 software, z-projections were made with NIH ImageJ within which contrast was equally adjusted. Images were imported into Adobe Photoshop for orientation.